

RemarksClaim Objections

The amended claim 1 has been amended with respect to the Claim Objections of the Examiner.

Allowable Subject Matter

The features of claim 4 filed with the RCE are added to claim 1 to follow the allowable subject matter proposed by the Examiner.

The currently amended claim 9 comprises the features of the claims 9 and 10 filed with the RCE. Therefore, it has also followed the allowable subject matter of the Office Action.

A new claim 24 has been added comprising the features of claim 9 and 22 filed with the RCE. This new independent claim 24 was necessary, because claim 22 referred to claim 9, which now has been amended by the features of claim 10.

For consistency in claims 1, 9 and 24, the term "uneven or projecting sections" has been used.

Claim Rejections-35 USC 102(b)

Claims 1, 3 and 9 stand rejected as being unpatentable over Langer et al (Langer).

The present invention according to claims 1, 9 and 24 is new and inventive in view of Langer.

Langer discloses a method and an apparatus for producing an object using stereography. The apparatus has a bath of liquid material in a container and the bath has a free surface. A support platform in the container supports and positions the object relative to the surface. Means for applying electromagnetic radiation is provided for solidifying a layer having solidified

Lindemann (MM) 54 199 10/080,936
Response to Office Action mailed 08/11/2005
Submitted December 8, 2005 by FAX to (571) 273-8300

6

sections of the material. A wiper is displaced by a displacement means to move a portion of the liquid material in the bath. A lower edge of the wiper is flexibly yielding so as to apply a thin film of liquid material on a surface of the solidified layer and liquid material between solidified sections. In order to fabricate the next layer, the container is thereupon filled with resin material to such an extent that the free surface of the liquid bath is above the lower edge of the wiper. The upper side of the support platform is then lifted to a predetermined elevation below the bath surface or below the lower edge of the wiper corresponding to the thickness of a layer for solidifying the next layer (column 3, line 40 to 63). When correctly moving the wiper and adjusting the parameters, a plane coating of liquid material is formed directly behind the wiper (column 4, lines 16 to 18).

A preferable application of the wiper is disclosed in column 5, line 132. In this method the solidification of a layer is carried in two steps to reduce deformation of the object owing to the shrinkage of the material when solidified (column 5, line 2 to 11). This method may produce uneven surfaces (column 5, line 10 and 11). To eliminate this unevenness, a thin film of liquid material is applied onto partly a solidified layer after the solidification of the first regions and before the solidification of the second region, so that the layer thickness at the second regions is larger than the already solidified layer thickness at the first regions (column 5, line 11 to 16).

Therefore, Langer does not teach a leveling device according to the invention which uncovers projecting sections or uneven sections of the last layer, that was melted, having uneven or projecting sections, which are larger than the desired layer thickness, which has to be processed. Thus, the features of the present claim 1 are new and inventive.

The devices according to claim 9 and 24 are provided for carrying out the process according to the inventive claim 1 and therefore are also allowable.

Lindemann (MM) 54 199 10/080,936
Response to Office Action mailed 08/11/2005
Submitted December 8, 2005 by FAX to (571) 273-8300

7

Claim 9 has been rewritten by adding the features of claim 10 and should therefore be allowable as indicated.

With respect to the new claim 24, Langer does not teach an applicator unit which comprises at least one scanning element with a closure section that interacts with an opening in the applicator unit. The device according Langer only discloses a wiper coating the second regions above that of the solidified surface of the first regions by an amount of liquid material for the next processing step. The layer thickness of this second regions is larger than the already solidified layer thickness of the first regions (column 5, line 15 and 16), and no selective application of material is taught by Langer. Langer taught a selective application of electromagnetic radiation to the first regions in a first step and to second regions in a further step.

Claim Rejections-35 USC 103(a)

Claim 2 and 22-23 stand rejected as being unpatentable by Langer in view of Mazumder. The applicator unit according to claim 24 is not obvious over Langer in view of Mazumder. The paragraphs 0023 and 0030 of Mazumder, as cited by the Examiner does only teach powder applicator units in a form of a nozzle for a laser sintering device to control the quantity of powder and the section of the work-piece to which the powder is applied. This is done in assistance of a separate optical device (fig. 2). However, Mazumder does not disclose any scanning element with a closure section that interacts with an opening in the applicator unit and opens or closes the opening of the applicator unit as a function or a size of projection section. Neither this function nor the scanning element with the closure section that interacts with the opening of the applicator unit is disclosed by Mazumder. Therefore, claim 24 is new and inventive.

Lindemann (MM) 54 199 10/080,936
Response to Office Action mailed 08/11/2005
Submitted December 8, 2005 by FAX to (571) 273-8300

8

A one-month extension of time in which to respond to the outstanding Office Action is hereby requested. Credit Card Payment Form PTO-2038 is enclosed to cover the prescribed Small Entity one-month extension fee of \$60.00.

Wherefore, further consideration and allowance of the claims is respectfully requested.

Respectfully submitted,



M. Robert Kestenbaum
Reg. No. 20,430
11011 Bermuda Dunes NE
Albuquerque, NM USA 87111
Telephone (505) 323-0771
Facsimile (505) 323-0865

I hereby certify this correspondence is being submitted to Commissioner for Patents, Washington, D.C. 20231 by facsimile transmission on December 8, 2005, fax number 571-273-8300.



M. Robert Kestenbaum